

## **ABSTRACT OF THE DISCLOSURE**

The present invention provides for flexibly configurable network diagnostic modules that can implement any of a plurality of network diagnostic functions. A network diagnostic module receives an indication that a selected network diagnostic function (e.g., network analyzer, jammer, generator, bit error rate tester, etc.) is to be implemented. The network diagnostic module receives a bit file with instructions or data for implementing the selected network diagnostic function at one or more ports. The network diagnostic module identifies a programmable logic module (e.g., a Field-Programmable Gate Array ("FPGA")) that controls the one or ports. The network diagnostic module loads a portion of the bit file at the identified programmable logic module to cause the programmable logic module and the one or more ports to interoperate to implement the selected network diagnostic function. A plurality of network diagnostic modules can be included in a common computer system chassis.

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